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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,510

02/22/2007

Sigeru Torii

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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
220 Fifth Avenue
16TH Floor
NEW YORK, NY 10001-7708

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

04/19/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,510	Applicant(s) TORII ET AL.	
	Examiner Virginia Manoharan	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g., typographical, grammar, idiomatic, syntax and etc. Applicants' cooperations are requested in correcting any errors of which applicants may become aware in the specification.

The abstract of the disclosure is objected to because of the inclusion of legal phraseology often used in patent claims such as "comprising " in lines 3 and 10; "comprises" in line 8; "means" in line 16 and "means for" in lines 13 and 15. Correction is required. See MPEP § 608.01(b).

The drawings are objected to under 37 CFR 1.83(a) because of the following reasons:

a).The drawings must show every feature of the invention specified in the claims. Therefore, the feature supplying means recited in claims 19 and 20 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

b). Figure s 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). See page 6, lines 28-31 indicating that Fig. 1 is a diagrammatic view showing a conventional simple distillation apparatus ; and Fig. 2 is a diagrammatic view showing a conventional fractional distillation apparatus.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 14-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). Claim 15 appears not to differ substantially with the structure of claim 16 as required by 37 CFR 1.75(b).

b). The inconsistent use of terminology such as: "a vaporizing portion" in claim 14, line 2 as opposed to "the vaporized portion" in claim 14, lines 4-5 is improper as it provides for ambiguity and confusion in the claims.

Art Unit: 1797

c). Claim 16 recites the limitation "the condensed medium" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-12 and 14-16 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 55-102401.

JP '401 discloses a means and method wherein a heated gas is blown by means of a gas transfer mechanism 3 against an organic solvent solution 4 in a vessel 1 [deemed corresponding to the method and apparatus of compulsorily contacting the liquid medium with a gas to vaporize the liquid medium in a vaporizing portion claimed in claims 11 and 14-16]; wherein the organic solvent vapor generated is fed into a vessel 2 in a vessel 5 forcedly cooled by means of a refrigerant tube 6 [deemed corresponding to the condensing of the vaporized medium in a condensing portion]; and a gas not condensed is again blown against the inside of the vessel 1 through the transfer mechanism 3 in a circulation path connected to a vacuum pump [corresponding to the claimed gas separated from the medium by condensation is used as the gas to be compulsorily contacted with the liquid medium using a gas feeding means for feeding the separated gas to the vaporizing means as the gas].

Claims 13 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 55-102401 in view of Neal et al (4,983,260).

Neal teaches the claimed condensing and separating means comprising a first condensing means for condensing the vaporized medium by cooling, and a second condensing means for condensing the vaporized medium passed through the first condensing means by further cooling in claim 17. See the abstract, Fig. 1 and col. 2, lines 48-63. Neal further teaches the claimed temperature-maintaining and heating means of the vaporizing means in claim 18. Note col. 3, lines 25-40. To combine the references would have been obvious to one of ordinary skill in the art inasmuch as both

Art Unit: 1797

references are directed to the same processing environment, i.e., to a distillation means and method.

Claims 19-23 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 55-102401 in view of Neal et al (4,983,260) as applied to claims 11-18 above, and further in view of Sussmeyer et al (4,584,062).

Sussmeyer teaches a method and apparatus including a heat transfer gas circulation circuit which corresponds to the claimed supplying means for feeding the vaporized medium generated by the vaporizing means to the vaporizing means as the gas claimed in claims 19-20. See col. 3, lines 5-8 and lines 19-24. To combine the references would have been obvious to one of ordinary skill in the art inasmuch as all the references are directed to the same processing environment, i.e., to an evaporation carried out in the presence of a gas forced into the liquid being vaporized.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a). Peter et al discloses a process and apparatus wherein a gas is circulated in the system.

b). Beckett discloses a means and method for controlling temperature in a system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (571) 272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444.

Art Unit: 1797

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Virginia Manoharan/
Primary Examiner, Art Unit 1797